

The proliferation of Green building rating programs has moved the concepts of sustainable design from the intuitive and anecdotal into the realm of science and consensus. Their quantifiable, checklist approach and standardized vocabulary make the concepts more accessible to professionals, clients, politicians – and the general public.

While LEED, for instance, does not explicitly discuss the 3Es of Environment, Economy, and Equity in the context of one another, it is possible to evaluate each credit for its impact on one or more of the 3Es. Through their simplicity alone, rating systems promote the 3Es of Sustainability, whether or not the user of the checklist is aware of it.

The LEED system groups credits with minimum requirements in each of four categories - Site, Water, Energy, and Materials. This promotes Green Building as multifaceted: even a minimum rating indicates a project achieves prerequisite credits across the categories.

There have been unintended consequences, however. Politicians can advocate for municipal ordinances that require proprietary certification for projects in their jurisdiction without understanding that a particular rating system may not be appropriate for all projects.

As an example: by any conventional measure a new metro line in a dense urban environment is "green". It takes vehicles off the roadways, reducing pollution and easing congestion on the surface, while speeding passengers along in a dedicated right-of-way. But it is difficult to achieve LEED prerequisite credits in the Site category when, by definition, tunneling requires the disturbance, removal and disposal of tons of material.

Designers, too, get caught up in meeting point or credit requirements while losing sight of the Big Picture. Architects urge their mechanical consultants to design systems that will achieve LEED Energy and Atmosphere points though those solutions may require a more robust structural system or greater floor-to-floor heights than another option.

Community college projects are often designed to a checklist, with poor overall results. The design of college facilities is defined as "successful" when they come in on time, under budget, and achieve the required Green project rating. College financial resources are Balkanized into Construction, Operations and Maintenance, and Staffing budgets. If the systems selected require training or additional monitoring, those costs will have an impact on the M&O budget. Though larger facilities are physically more efficient on a cost-per-student basis, a laboratory may be designed for 24 students because the staffing budget doesn't permit hiring a teaching assistant and one instructor can safely oversee just 24 students. Instructors are reluctant to endorse larger labs because they fear the administration will fill the "empty" seats, even if additional staff is not allocated.

The implementation of the philosophy of sustainability requires that the all affected systems and their interconnections be understood. Projects with a Sustainable Agenda must consider building systems, ecologic conditions, political environments and financial resources before making alterations - essentially, the 3Es. By constraining the assessment of a project's Green potential to a checklist, we can miss opportunities to understand synergistic systems and inadvertently create disincentives to innovation.

Environment, Economy, Equity - let's add a fourth E: Experience.